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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/986,375

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Ruen-Rone Lee

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09/03/2004

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EXAMINER

STREGE, JOHN B

ART. UNIT

PAPER NUMBER

2625

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,375

Applicant(s)

LEE ET AL.

Examiner

John B Stregre

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over White USPN 4,625,290 in view of Palm USPN 5,748,199.

Figure 1 of White discloses a system for producing anaglyph presentation (col. 3 lines 1-3). A video source generates a video signal corresponding to a sync signal in order to cause selected portions of the images to appear at different depths (col. 2 lines 25-34 and col. 3 lines 58-61). After passing through the gating control switch, an anaglyph image for the left eye and the right eye is outputted in which one is tinted green and the other is tinted red which are complementary colors (col. 4 lines 3-19). As can be seen in the figure these are output in response to the sync signal. Furthermore within the interface circuit 20 used to generate the anaglyph image are 16-bit memories (col. 7 lines 48-52).

White does not explicitly disclose outputting a filtered left image and a filtered right image, although it can be seen that from the gating control switch outputs two different color images. It is well known in the art of anaglyph generation to filter a color image in order to break it into components. As seen in figure 16, Palm discloses a method for producing a color anaglyph output 470 in which the color pixels (420, 430) of

Art Unit: 2625

a right 410 and left image 400 are separated by color plane separators (440, 450) (col. 25 lines 35-50). Here the color plane separators can be read as color filters. By doing this separation certain adjustments to the colors can be made to avoid the psychological disturbances that sometimes come from viewing anaglyphs (col. 25 line 63 – col. 26 line 29).

White and Palm are analogous art because they are from the same field of endeavor of producing anaglyphs.

At the time of the invention it would have been obvious to one of ordinary skill in the art to filter the colors of an RGB signal in order to later superimpose them as does Palm to create an anaglyph image. The motivation for doing so would be to adjust the colors in the anaglyph to eliminate the disturbances that can result from anaglyphs. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to combine White and Palm to obtain the invention as specified in claim 1.

Regarding claim 2, as seen in figure 1 the interface circuit 20 outputs the red and green signals in accordance with the sync signal.

Regarding claim 12, Palm discloses a color plane combiner 460 (read as an adder) to superimpose the right and left images to form an anaglyph.

Regarding claims 13-14, it would be obvious to use a mask in order to separate the colors. As is well known in the anaglyph art and disclosed by White, chromatically selective filters worn over each eye may separate the colors that a viewer sees from an image. Palm does not explicitly disclose that the color separator 450 (figure 16) contains masks that are multiplied by the images, however the colors are separated and it would

be obvious to do so by multiplying it The motivation is that masking is an effective method for filtering.

Regarding claim 15, as admitted in the claim it is well known to use bit-block transfer operations in computer graphics techniques. It would have been obvious to do so with the invention of White since it deals with binary sequences to output the images superimposed (col. 4 lines 3-19).

Regarding claim 16-17, as discussed White discloses a red and a green output. White further discloses that each part of the stereogram is selectively presented to a different eye of a viewer by chromatically selective filters worn over the eyes (col. 4 lines 50-55) thus creating a perception of depth (col. 3 lines 45-49). Furthermore Palm discloses that color separation of stereo images has been utilized for over 50 years where in prior art devices stereo images are separated by mutually extinguishing filters such as a blue-green lens filter and a red filter (col. 2 lines 40-50).

Regarding claims 18-19, Palm discloses using complementary colors to create an anaglyph image (col. 2 line 60 – col. 3 line 11).

Palm nor White do not disclose expressly using a red-blue color and a green color.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a red-blue color and a green color to create the anaglyph. Applicant has not disclosed that doing so provides an advantage over other complementary colors, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to

Art Unit: 2625

perform equally well with the blue-green and red colors because they are also complementary colors.

Therefore, it would have been obvious to one of ordinary skill in this art to modify White and Palm to use red-blue and green colors to obtain the invention as specified in claims 18-19.

Regarding claim 20, Palm discloses that in animation it would be desirable to be able to selectively implement either 2-dimensional perspective images or three dimensional stereo views (col. 6 lines 6-10), thus providing motivation for enabling stereo views or two dimensional views.

Allowable Subject Matter

Claims 3-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Butterfield et al. 4,734,756 Stereoscopic Television System.

Dawson US Publication 2002/00218332 Method and Apparatus for Producing Anaglyphic 3-D Images.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B Strege whose telephone number is (703) 305-8679. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS



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